

**REMARKS**

Claims 21-40 are pending in this application. By this Amendment, claims 21 and 23 are amended and non-elected, withdrawn claims 41-56 are canceled. Applicants reserve the right to file one or more divisional applications to pursue the subject matter of the non-elected claims. Support for the claim 21 and 23 amendments may be found for example on page 7, lines 18-19.

Claims 21, 22, 25, 26, 29, 31, 33, 35, 37 and 39 stand rejected under 35 U.S.C. §103(a) over Ueda, U.S. Patent No. 6,242,072. This rejection is respectfully traversed.

Ueda fails to teach or suggest a honeycomb structure having a specific porosity per unit volume (cm<sup>3</sup>) that gradually increases from the inflow end part side to the outflow end part side, as recited in claim 21. In claim 21, this rate is 0.2%/mm or less. Ueda also fails to teach or suggest a structure further having a reinforcing agent impregnated therein, wherein the reinforcing agent comprises at least one element selected from the group consisting of Si, Ti, Mg and Al.

The Office Action concedes that Ueda does not teach or suggest the specific rate for the porosity per unit volume, but alleges that this feature is optimization of a result effective variable "involving routine skill". (See page 3 of the Office Action.) Applicants do not agree that the discovery of this specific rate is mere optimization. As shown in Table 1 and as described on page 39, honeycomb structures having the claimed porosity per unit volume (i.e., Examples 1-12) were superior in thermal shock resistance as compared to the honeycomb structures used in Comparative Examples 1 and 2. More specifically, Example 11 had a rate of 0.08 %/mm, which resulted in a critical temperature of 780° C. In comparison, Comparative Example 2 had a rate of 0.28%/mm, which resulted in a lower critical temperature of 690° C, and thus, was less resistant to thermal stresses.

Ueda also fails to teach or suggest a honeycomb structure having a reinforcing agent impregnated therein. Ueda teaches the use of a slurry of one of the components of cordierite (i.e. talc, alumina or kaolin) to lower the melting temperature of the cordierite during the firing process and thereby adhere the slurry to the structure. In contrast, one of the mechanisms by which the reinforcing agent strengthens the structure is to penetrate into the pores in the structure substrate to reduce the volume of the pores. Ueda does not teach or suggest such a reinforcing agent.

Because Ueda fails to teach or suggest all the claimed features, withdrawal of the 35 U.S.C. §103(a) rejection of claims 21, 22, 25, 26, 29, 31, 33, 35, 37 and 39 is respectfully requested.

Claims 23, 24, 27, 28, 30, 32, 34, 36, 38 and 40 stand rejected under 35 U.S.C. §103(a) over Ito, U.S. Patent Publication No. 2001/0003728. This rejection is respectfully traversed.

Like Ueda, Ito fails to teach or suggest the claimed specific porosity per unit volume rate. Moreover, Ito teaches away from a honeycomb structure having a reinforcing agent impregnated into the pores. More specifically, Ito states:

[W]hen pores are filled with reinforcing materials, the disappearance of pores open to the surface leads to a decrease in the surface area of said body. Therefore, the amount of a supported catalyst or the amount of a supported carrier having large surface area, which is a medium for applying a catalyst to said body, decreases, and then it is difficult to satisfactorily achieve catalytic performance.

*See* Ito, paragraph [0007]. In view of this particular teaching, a person of skill in the art would not have been motivated to include a reinforcing agent impregnated into the honeycomb structure.

Because Ito fails to teach or suggest all the features of the claimed honeycomb structure, and in fact teaches away from the claimed structure, withdrawal of the 35

U.S.C. §103(a) rejection of claims 23, 24, 27, 28, 30, 32, 34, 36, 38 and 40 is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 21-40 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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